FIGURE 1

4D SeisRes Loop

A. 4D RAI Inversion H.

I. Optimization $V_p, V_s, E\rho, \Sigma$

B. Logs φ, lith, k

C. Reservoir Characterization

G. Tc.

F. 3D Elastic Seismic Model

G. Seismic Migration

D. MMS Earth Model Building

E. Reservoir Simulator

F I G U R E   2

1. 1. 0
**User Interface
Layer**

| ACTIVE
NOTEBOOK

Web-based
Browser |

2. **Control
Layer**   2.1 Job
Scheduler   2.2 OPTIMIZER   3D DATA VIEWER 2.3
VTK based Visualizer

Data Services Layer	Application Pool
3.1 PIO Persistent Data Storage	EARTH GM
3.2 EE Events	RAI
3.3 FC Foundation Classes	← 3DEFDSS
3.4 MULTIMESH Shared Earth Model	VIP
3.5 SRIO Input/Output Registry	ECLIPSE
3.6 FILTER Filtering/Manipulation	OMEGA

3.